pvTector

Troubleshooting made easy!
THE diagnostic tool for solar system installers, electrical installers and photovoltaic surveyors.

A lack of voltage on a module string is a common occurrence on solar arrays, and a relatively simple fault.

A relatively simple fault that occurs regularly with solar installations is a lack of power on one of the module strings. Although the cause is usually a simple one, locating the faulty module or open circuit can often be more difficult than you expect.

The pvTector can help.

It does exactly what its name suggests: pvTector detects open-circuit faults in cables. It works much like a conventional cable detector. A small transmitter superimposes two different signals onto each of the DC lines of the PV module string – one signal for the positive and a slightly different signal for the negative line. Moving the receiver along the module array converts the signals into audible tones. The warning tone sounds whenever the receiver is close to a module or one of the module string's DC power lines. If you are near the negative line, you hear the negative warning tone; if you are near the positive line, you hear the positive warning tone. To find out where the break has occurred, move from one module to the next until the positive tone suddenly changes to negative (or vice versa).

Now that you have discovered where the fault is, you can proceed to pinpoint it precisely. If the system lacks maintenance access points and you are unable to gain direct access to the modules, you have the option of attaching the receiver to a telescopic pole or to an unmanned aerial vehicle. It has never been easier to pinpoint the location of an open circuit.

Dimensions of the pvTector:

Transmitter	H x W x D:	45 mm x 80 mm x 150 mm
Receiver	H x W x D:	22 mm x 60 mm x 80 mm

The pvTector can do much more.

It can also locate module strings. If, for example, you do not know exactly which cable in a bundle of DC lines belongs to which roof-mounted module string, you can use the pvTector to quickly find out. All you have to do is connect a single pole (positive or negative). The superimposed signal will be heard along the entire string, allowing you to see immediately which module belongs to which module string.

The pvTector's transmitter operates from a conventional 230V outlet. It is also equipped with an internal rechargeable battery for use on a roof or with a ground-mounted array where no 230V supply is available. The battery is recharged automatically whenever the device is operated from the mains.

The device has three connections – positive, negative and earth – each in the form of a conventional test socket. Accessories supplied include a set of test leads with MC (Multi-Contact) 4 connectors, a set of adapters for MC3, and an earthing lead. The earth connection is required only when the transmitter is operating in battery mode.

The receiver, which operates from a standard 9V battery, contains an acoustic sounder with two sensitivity settings.

photovoltaikbüro
Ternus & Diehl GbR

Schönauerhofstr. 27 Tel.: +49 61 42 95 30 47-0 info@photovoltaikbuero.de
D-65428 Rüsselsheim Fax: +49 61 42 95 30 47-9 www.photovoltaikbuero.de